

## CLAIMS

We claim:

1. A coding symbology comprising:
  - 5 a substrate;
  - a plurality of light-reflecting segments separated by spaces and disposed on the substrate, the spaces defining light-absorbing segments;
  - wherein the light-reflecting segments and the light-absorbing segments define a negative image bar code representing fixed information and variable information; and
  - 10 wherein the coding symbology is detectable using a reader.
2. The coding symbology of claim 1 wherein the light-reflecting segments are indicia that can be detected by a reader.
- 15 3. The coding symbology of claim 2 wherein the indicia is visible to the naked human eye.
4. The coding symbology of claim 3 wherein the indicia has a color selected from the group consisting of white, red, yellow, orange, gold, and silver.
- 20 5. The coding symbology of claim 3 wherein the indicia is not visible to the naked human eye.
6. The coding symbology of claim 1 wherein the fixed information remains unchanged for a first period of time while the variable information changes during the first period.
- 25 7. The coding symbology of claim 1 wherein the fixed information is selected from the group consisting of product name, product manufacturer, Universal Product Code, Universal Product Number, National Drug Code, National Health Related Industry Code, and label copy data.
8. The coding symbology of claim 1 wherein the variable information is selected from the group consisting of lot number, batch number, expiration date, serial number, production time, price, inventory control data, and concentration.
- 35 9. The coding symbology of claim 1 wherein the coding symbology is disposed on a medical container.
10. The coding symbology of claim 1 wherein the substrate comprises a thermoplastic polymer or a thermoset polymer.

11. The coding symbology of claim 1 wherein the thermoplastic polymer or the thermoset polymer is selected from the group consisting of polyvinylchloride, polyvinylchloride, polyolefins, polyamides, polycarbonates, polyesters, thermoplastic 5 elastomers, elastomers, polyimides, polyurethanes, ethylene vinyl alcohol copolymers, ethylene vinyl acetate copolymers, ethylene copolymers, propylene copolymers, acrylic acid copolymers, ethylene substituted acrylic acid copolymers,  $\alpha$ -olefin substituted acrylic acid copolymers, hydrocarbon block polymers, ethylene propylene diene polymers, nylon, mono-layer film structures and multi-layer film structures.

10 12. The coding symbology of claim 11 wherein the polyolefin is produced from an  $\alpha$ -olefin having from about 2 to about 20 carbons.

15 13. The coding symbology of claim 12 wherein the  $\alpha$ -olefin is ethylene or propylene.

14. A container having a coding symbology comprising:

a substrate;

a plurality of light-reflecting segments separated by spaces and disposed on the substrate, the spaces defining light-absorbing segments;

20 wherein the light-reflecting segments and the light-absorbing segments define a negative image bar code representing fixed information and variable information;

wherein the coding symbology is detectable using a reader; and

25 wherein the substrate comprises a pouch-type flexible container.

15. A coding symbology comprising:

a substrate;

a first plurality of light-reflecting segments separated by spaces and disposed on the substrate, the spaces defining a first set of light-absorbing segments, and wherein the first plurality and the first set define a first bar code representing fixed information;

30 a second plurality of light-reflecting segments separated by spaces and disposed on the substrate, the spaces defining a second set of light-absorbing segments, wherein the second plurality and the second set define a second bar code representing variable information; and wherein the coding symbology is detectable using a reader.

35 16. A container having a coding symbology comprising:

a substrate defining a portion of the container;

a plurality of light-reflecting segments separated by spaces and disposed on the substrate, the spaces defining light-absorbing segments;

40 wherein the light-reflecting segments and the light-absorbing segments define a negative image bar code representing fixed information and variable information;

wherein the negative image bar code is detectable using a reader; and  
wherein the container is a medical container.

5        17. A container comprising:

a substrate;

a first plurality of light-reflecting segments separated by spaces and disposed on  
the substrate, the spaces defining a first set of light-absorbing segments, and wherein the first  
plurality and the first set define a first bar code representing fixed information;

10      a second plurality of light-reflecting segments separated by spaces and disposed  
on the substrate, the spaces defining a second set of light-absorbing segments, and wherein the  
second plurality and the second set define a second bar code representing variable information;

wherein the first bar code and second bar code are detectable using a reader; and  
wherein the container is a medical container.

15        18. A container system comprising:

a primary container having a substrate;

a plurality of light-reflecting segments separated by spaces and disposed on the  
substrate, wherein the spaces define light-absorbing segments, wherein the light-reflecting  
segments and the light-absorbing segments define a bar code representing fixed information and  
variable information, and wherein the bar code is detectable using a reader; and

a material positioned over a portion of the substrate.

20        19. A container system comprising:

a primary container having substrate;

a first plurality of light-reflecting segments separated by spaces and disposed on  
the substrate, the spaces defining a first set of light-absorbing segments, and wherein the first  
plurality and the first set define a first bar code representing fixed information;

25      a second plurality of light-reflecting segments separated by spaces and disposed  
on the substrate, the spaces defining a second set of light-absorbing segments, and wherein the  
second plurality and the second set define a second bar code representing variable information;  
30      wherein the first bar code and the second bar code are detectable using a  
reader; and

a material positioned over a portion of the substrate.

35        20. A container system comprising:

a primary container having substrate;

a first plurality of light-reflecting segments separated by spaces and disposed on  
the substrate, the spaces defining a first set of light-absorbing segments, and wherein the first  
plurality and the first set define a first bar code representing fixed information or variable  
40      information;

5 a material positioned over a portion of substrate;  
a second plurality of light-reflecting segments separated by spaces and disposed on the material, the spaces defining a second set of light-absorbing segments, and wherein the second plurality and the second set define a second bar code representing fixed information or variable information;

10 wherein the first bar code and the second bar code are detectable using a reader; and

15 wherein the combination of the first bar code and the second bar code represent fixed information and variable information.

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21. A container system comprising:

a primary container having a substrate;

a material positioned over a portion of the substrate;

15 a plurality of light-reflecting segments separated by spaces and disposed on the material, the spaces defining light-absorbing segments, and wherein the light-reflecting segments and the light-absorbing segments define a bar code representing fixed information and variable information; and

20 wherein the bar code is detectable using a reader.

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22. A container system comprising:

a primary container having substrate;

a material positioned over a portion of the substrate;

25 a first plurality of light-reflecting segments separated by spaces and disposed on the material, the spaces defining a first set of light-absorbing segments, and wherein the first plurality and the first set define a first bar code representing fixed information;

30 a second plurality of light-reflecting segments separated by spaces and disposed on the material, the spaces defining a second set of light-absorbing segments, and wherein the second plurality and the second set define a second bar code representing variable information;

wherein the first bar code and the second bar code are detectable using a reader.

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23. A method of transferring a negative image bar code onto a web of material comprising the steps of:

providing a web of material;

35 providing a printer capable of transferring a negative image bar code onto the web in response to a signal representative of the negative image bar code, the negative image bar code representing fixed information and variable information; and

transferring the signal to the printer; and

transferring the negative image bar code onto the web of material.

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24. The method of claim 23 wherein the printer is a thermal transfer printer.

25. A container system comprising:

a primary container having a substrate;

5 a material positioned over a portion of the substrate;

wherein the container system has a negative image bar code representing fixed information and variable information, and wherein the negative image bar code is detectable using a reader.

10 26. The container system of claim 25 wherein the negative image bar code is disposed on the primary container.

27. The container system of claim 25 wherein the negative image bar code is disposed on the material.

15 28. The container system of claim 25 wherein the material is positioned over a portion of the negative image bar code.

29. A container system comprising:

a primary container having a substrate;

a material positioned over a portion of the substrate;

20 wherein the container system has a first negative image bar code representing fixed information and a second negative image bar code representing variable information, and wherein the first and second negative image bar codes are detectable using a reader.

25 30. The container system of claim 29 wherein the first and second negative image bar codes are disposed on the primary container.

30 31. The container system of claim 29 wherein the first and second negative image bar codes are disposed on the material.

32. The container system of claim 29 wherein the first negative image bar code is disposed on the primary container and the second negative image bar code is disposed on the material.